

EMS Annual Meeting Abstracts
Vol. 19, EMS2022-141, 2022
https://doi.org/10.5194/ems2022-141
EMS Annual Meeting 2022



Tiny Weather Forecast Germany - an open source weather app based on open data from the Deutscher Wetterdienst (DWD)

Pawel Dube
Germany (pawel.dube@sodamail.de)

Weather data and especially a precise weather forecast on mobile devices is of great public interest. However, many apps for mobile devices are closed-source and even a lot of open source weather apps rely on commercial weather data providers. An other drawback of many weather apps is a great number of requested permissions on the device.

The idea was to create a free, open source weather app based on the open data from the Deutscher Wetterdienst (DWD). An other requirement was a privacy-friendly design without user-tracking. Furthermore, the package size should remain low and the amount of data traffic should be limited as far as possible.

The app is continuously developed since 2020. The first version was released in July 2020, and it left beta status in September 2020. It started with a simple weather forecast, features added over time include weather warnings for Germany, weather texts provided by the DWD and a rain radar. Lately, notifications about warnings applying to the selected location were added.

The project is licensed under the "GNU General Public License v3.0 or later", ensuring that it will remain open source. It uses only open source code, especially no binary or closed-source libraries were used. This contributes to transparency and keeps the size of the program package fairly low (approx. 7 MB, version 0.58.0). The number of required permissions is very limited. Internet traffic only takes place between the app and the open data server of the DWD in order to fetch weather forecast data and weather warnings.

The project also uses non-commercial infrastructures on the web: it is hosted on codeberg.org, published on fdroid.org and translations take place on a private platform. Many volunteers contributed to the project over time and translated it into many languages.

Challenges were a proper implementation of weather warnings without using proprietary push services, and also the correct implementation and use of the open data without any special knowledge on meteorology despite a very good documentation by the DWD.